

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** July 6, 2012

Thru: Bridget C. Bohac, Chief Clerk
Zak Covar, Executive Director

From: Steve Hagle, P.E., Deputy Director
Office of Air

Docket No.: 2011-1486-RUL

Subject: Commission Approval for Rulemaking Adoption
Chapter 106, Permits by Rule
House Bill 3268: Combined Heat and Power Units
Rule Project No. 2012-008-106-AI

Background and reason(s) for the rulemaking:

House Bill (HB) 3268, 82nd Legislature, 2011, created Texas Health and Safety Code (THSC), §382.051865, which requires that the Texas Commission on Environmental Quality (TCEQ) develop and issue a standard permit or permit by rule (PBR) for the authorization of stationary natural gas engines and turbines used in a combined heat and power (CHP) system. In a CHP system, heat resulting from the operation of the engine or turbine, which is typically wasted, is recovered and used for another purpose such as heating water or providing cooling for facility operations. HB 3268 was authored by Representative Lanham Lyne and sponsored by Senator Craig Estes. HB 3268 requires that the TCEQ adopt the CHP PBR or standard permit no later than September 1, 2012.

Scope of the rulemaking:

The adopted rule would create a new PBR under Chapter 106 specifically designed to authorize emissions from natural gas-fired CHP units. Owners or operators of CHP units would have the option to use this new PBR for authorization as an alternative to the existing air quality standard permit for electric generating units or a case-by-case air permit under 30 TAC Chapter 116. Owners or operators of CHP units would still have the option to use the standard permit for electric generating units, or a case-by-case permit.

A.) Summary of what the rulemaking will do:

The rulemaking would add a PBR under new §106.513 to authorize emissions from natural gas-fired CHP units, up to a capacity of 8 megawatts (MW) without additional controls, and 15 MW with additional controls. The PBR includes emission limits for pollutants of concern, and appropriate monitoring, testing, and recordkeeping requirements to allow TCEQ to verify compliance.

B.) Scope required by federal regulations or state statutes:

The legislation and corresponding THSC, §382.051865 require that the PBR cover stationary natural-gas fired CHP units. THSC, §382.051865 states that in developing the PBR, TCEQ may (but is not required to) consider: 1) the geographic location of the unit, including proximity to nonattainment areas; 2) the annual operating hours of the unit; 3)

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the technology employed by the unit; 4) the type of fuel used; and, 5) other emission control policies of the state. THSC, §382.051865 also specifies that the PBR may not distinguish between the end-use functions powered by the stationary natural gas engine or turbine.

C.) Additional staff recommendations that are not required by federal rule or state statute: None.

Statutory authority:

The rule is adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code; and under THSC, §382.017, concerning Rules, which authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The rule is also adopted under THSC, §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.051, concerning Permitting Authority of Commission; Rules, which authorizes the commission to issue a PBR for types of facilities that will not significantly contribute air contaminants to the atmosphere; §382.05196, concerning Permits by Rule, which authorizes the commission to adopt permits by rule for certain types of facilities; §382.057, concerning Exemption, which authorizes exemptions from permitting; and §382.051865, which requires the commission to issue a standard permit or PBR for stationary natural gas engines used in a combined heating and power system. The adopted rule implements THSC, §§382.002, 382.011, 382.012, 382.017, 382.051, 382.051865, 382.05196, and 382.057.

Effect on the:

The adopted PBR should have a minimal effect on the regulated community and the public. The adopted PBR would apply to electric generation projects which employ CHP technology. The use of the PBR is not mandatory, although staff anticipates that owners and operators of eligible CHP units will prefer the adopted PBR to a case-by-case permit or a standard permit. The adopted PBR does not create a new group of affected persons, as owners and operators of CHP units are already required to authorize emissions under existing TCEQ rules, and use of the PBR is not mandatory.

A.) Regulated community: The adopted PBR would provide an easier, faster, and generally less costly method to authorize air emissions from CHP facilities, compared to existing TCEQ rules and authorizations.

B.) Public: The adopted rule is not expected to directly affect the general public. However, this PBR would generally improve the flexibility of the electric power grid by

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encouraging efficient, on-site power production. This PBR also allows for the recovery and productive use of heat energy that would normally be wasted.

C.) Agency programs: The adopted rule would not have a significant effect on agency programs.

Stakeholder meetings:

No stakeholder meetings were held. A public hearing on the proposed PBR was held, as is required for all air rules.

Public comment:

The commission received comments from the American Council for an Energy-Efficient Economy, General Electric (GE), Siemens Energy, Inc., Solar Turbines, Inc., Stewart & Stevenson, Texas Combined Heat and Power Initiative, Tognum America, United States Clean Heat and Power Association, Universal Energy, and an individual. Most commenters generally supported the concept of a PBR for CHP units, however, all commenters suggested changes to the proposed rule.

Most comments were focused on one of the following subjects: 1) A desire for the PBR to allow larger size units; 2) A desire for the PBR to allow multiple CHP facilities at a site; 3) A desire for the PBR to allow fuels other than pipeline quality natural gas; and 4) A desire for the PBR to include units which have supplemental firing downstream of the electric generating unit. Other comments related to alternate methods of heat recovery; the definition of a CHP unit; the derivation of the CHP credit, and the registration requirements of the PBR.

Significant changes from proposal:

In response to multiple comments, the PBR has been revised to increase the size of units which could be authorized under the PBR. The proposed PBR was limited to a generating capacity of 5 MW. This capacity has been increased to 8 MW, and if additional controls are applied, a capacity of up to 15 MW would be allowed. These capacities apply to a single unit or group of units. In certain circumstances, the PBR allows for multiple units or multiple groups of units, so the total generating capacity at the site may be higher.

In response to multiple comments, the PBR has been revised to define certain configurations or scenarios under which multiple CHP units or groups of units can be authorized. These include situations where all emission points are located within a circular area with a 200 foot radius, and situations where all emission points are separated by a distance of at least 900 feet from each other.

In response to comments, the PBR has been revised to allow the use of propane, liquefied petroleum gas, gasoline, diesel, and fuel oil as emergency fuels, for a limited time period. However, some other fuels suggested by commenters (such as refinery fuel gas, and various waste gases) are still not included under this PBR.

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The emission standards have been restructured. In order to allow for larger units under the PBR while maintaining protectiveness, a more stringent NO_x emission standard of 0.7 lb NO_x/MWh and a requirement for an oxidation catalyst control device have been added to the PBR. These more stringent standards would only apply to units or groups of units with a capacity exceeding 8 MW.

Potential controversial concerns and legislative interest:

There are no particularly controversial issues with the rule. The requirement for an oxidation catalyst control device on larger units may be unusual for a PBR, but it was necessary to ensure that these larger facilities maintain compliance with applicable NAAQS. There may be general legislative interest in following TCEQ's progress with implementing the legislation.

Will this rulemaking affect any current policies or require development of new policies? No.

What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?

HB 3268 requires TCEQ to either adopt a PBR or a standard permit to authorize CHP facilities. While the legislation could be implemented with a non-rule standard permit, there is no particular benefit for TCEQ or the regulated community in doing so, as the overall process in developing a standard permit would be similar to the process of developing a PBR.

Key points in the proposal rulemaking schedule:

***Texas Register* proposal publication date:** March 9, 2012

***Anticipated Texas Register* publication date:** August 10, 2012

Anticipated effective date: August 16, 2012

***Six-month Texas Register* filing deadline:** September 9, 2012

Agency contacts:

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Attachments

Copy of HB 3268

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